at length the discoveries of Dr. Schliemann, at Mycenæ. He concludes that the supposed analogy of the treasures to Byzantine work is delusive, and that they are of a very early date.

In *Popular Science Monthly* for June, Herbert Spencer writes on The Evolution of the Family, and Prof. Wm. B. Carpenter on Mesmerism-Odylism, Table Turning, and Spiritualism.

In the *Atlantic Monthly* for May, Mr. Edward H. Knight begins a series of illustrated articles on Crude and Curious Inventions at the Centennial Exhibition, commencing with musical instruments.

The *Nineteenth Century* for June contains an article on Infanticide, by C. A. Tyffe.

Dr. Dalrymple, of Baltimore, sends us an interesting pamphlet entitled, Excerpta ex Diversis Litteris Missionariorum, issued during the first part of the present year.

In the Transactions of the Wisconsin Academy of Science, etc., vol. iii. 1875–1876, the following archæological papers appear: The Ancient Civilization of America, by W. L. J. Nicodemus; Copper Tools found in the State of Wisconsin, by J. D. Butler; Report of the Committee on Exploration of Indian Mounds in the Vicinity of Madison.

Dr. Gustav Bruhl has sent to the Smithsonian Institution four pamphlets, printed in German, on Die Culturvölker Alt Amerikas, treating of the Mississippi Valley, Mexico, Chiapas and Yucatan, and Central America.

An article in the *Church Gazette*, x., No. 4, New York, treats of the Proto-Historic Settlement of America.

Prof. J. Hammond Trumbull sends to the *Magazine of American History*, June, a note on the Indian names of places on Long Island, derived from esculent and medicinal roots.

Before the Anthropological Institute of London, April 24th, three papers were read on American subjects: On the Migrations of the Eskimo, by Dr. John Rae; On Earthworks in Ohio, by Robert B. Holt; Note on Skulls from Ohio, by Prof. Geo. Busk.

The Annual Report of the Commissioner of Indian Affairs and that of the Board of Commissioners must not be overlooked in the summary of contributions to American ethnology. The map of the location of tribes in the former is especially valuable. — Otis T. Mason.

GEOLOGY AND PALÆONTOLOGY.

Pan-Ice Work and Glacial Marks in Labrador. — In an article in the *Canadian Naturalist* (viii. No. 4), entitled Notes on some Geological Features of the Northeastern Coast of Labrador, Prof. H. Y. Hind describes the action of pan-ice in abrading and polishing the rocks both above and below the sea level. He gives an account of the mode of formation of the remarkable gneiss steps or terraces in Tooktoosner Bay, south of Hopedale, and in Lake Melville, Hamilton Inlet. His

observations fully supplement and corroborate the writer's[1] statements made ten years ago in a paper which Mr. Hind has evidently overlooked. Mr. Hind personally traced this action of shore ice to an altitude of six hundred feet above the ocean, — we had at a rough estimate put the height of these rock terraces at five hundred feet above the sea, — and concluded that the action of the shore ice reached the height of one thousand feet (p. 222), a conclusion independently formed by Mr. Hind (*Can. Nat.*, p. 231), as he remarks that "erratics and local rounded fragments of rock are not numerous until a height exceeding one thousand feet is attained, and even then, except perhaps in hollows, which I had no opportunity of examining, bowlders and perched rocks are very much less numerous than at greater elevations in the far interior, where I saw them in countless multitudes in 1861." We differ, however, from Mr. Hind in considering that this work of abrasion is performed rather in the autumn, winter, and especially in the spring when the ice is breaking up, and is due almost exclusively to ice formed on the shore rather than in part by floe ice which comes down from the north after June.

In Tooktoosner Bay, Mr. Hind saw, "in a secluded and protected hollow, well-marked and deeply cut grooves. They occupied a shallow and cup-shaped basin, but all surrounding surfaces were smoothly polished, pan-ice having removed every trace of groove or striæ." Professor Hind concludes that no ice-foot is formed on the Labrador coast or in Greenland, but we should be disposed to question the validity of this conclusion, as we are inclined to ascribe the wearing and polishing of the rocks rather to ice formed on the coast than to foreign ice floating past the shore in summer. Professor Hind's conclusion we present in the author's own language: —

"It has been shown by Dr. Petermann and others that the difference between the coastal climate of Greenland and the Labrador is very great. The southwestern coast of Greenland is much milder than that of the Labrador in the same parallels.[2] A surface sheet of warm water, floating from south to north, is determined on to the coast of Western Greenland by the rotation of the earth. A cold arctic current laden with ice from Davis and Hudson straits flows from north to south and is determined on to the Labrador coast by the rotation of the earth. Hence the sea on the Labrador coast is cooled sometimes in November and early in December to 29°, and even 28°, and the lolly of the sealers, or ice spiculæ, or anchor ice, forms rapidly during the first cold snap in November, along the entire coast line; and before Christmas, all the coastal waters within the zone of islands are frozen in one solid sheet, so that no ice-foot is formed on the Labrador like the ice-foot on the Greenland shores. In brief, it may be said that the stupendous work of

[1] Glacial Phenomena of Labrador and Maine. Memoir of the Boston Society of Natural History, vol. i., 1867, pp. 225, 228. By A. S. Packard, Jr.

[2] Vide a paper entitled Further Enquiries on Oceanic Circulation, by Dr. W. B. Carpenter, F. R. S., Proceedings of the Royal Geological Society, August, 1874.

ice on the Labrador, apart from glacial sculpturing, appears to be almost altogether due to the periodical action of pan-ice deriving its power and constant opportunities from the arctic current, which presses continually on the Labrador coast."

New Fossil Fishes from Wyoming. — At a recent meeting of the American Philosophical Society, Professor Cope announced the discovery of a new locality of the Green River shales, containing fishes, insects, and plants in a good state of preservation. Owing to the rather soft nature of the matrix the characters of the fishes could be worked out with much nicety. A collection which he had recently received includes sixteen species of fishes, mostly new. Their names are as follows: —

? *Chromididæ: Priscacara serrata* Cope; *P. cypha* Cope; *P. liops* Cope.

Percidæ: Mioplosus abbreviatus Cope; *M. labracoides* Cope; *M. Beanii* Cope; *M. longus* Cope.

Asineopidæ: Asineops pauciradiatus Cope.

? *Aphredodiridæ: Erismatopterus Endlichii* Cope; *Amphiplaga brachyptera* Cope.

Clupeidæ: Diplomystus dentatus Cope; *D. analis* Cope; *D. pectorosus* Cope; *D. humilis* Leidy; *D. altus* Leidy.

Osteoglossidæ: Dapedoglossus testis Cope: *D. encaustus* Cope.

Of the above genera all but two are new to science, and all of the species but three are likewise new. From the present collection something like a general view of the ichthyological fauna can be obtained, since the predominant types are probably represented in it. *Priscacara* is a Pharyngognath allied to the *Chromididæ* and *Pomacentridæ*, most nearly to the former; and *Dapedoglossus* is not far removed from *Arapæma* and *Osteoglossum*. The facies of the fauna is of a mixed character, both fresh-water and marine types being present. The largest species is the *Osteoglossum encaustum;* the second in size is the *Diplomystus dentatus*, which exceeds the moss-bunker (*Brevurtia menhaden*).

The species and genera are in process of publication in the Bulletin of the U. S. Geological Survey of the Territories.

GEOGRAPHY AND EXPLORATION.

Rise of Great Salt Lake. — While I was spending a few days in June last at Salt Lake, my attention was called to the evident rise in the Great Salt Lake, which had taken place since my last visit to the lake, in August, 1875. The point where I noticed the fact of a rise was at Farmington, Utah, where from overflowed salt vats that were above water in 1875, and from the wearing away of the shore, I roughly judged that the lake had risen at least twelve inches. Mr. W. V. Haight, a farmer, who owns the land at the point visited, confirmed my impressions. At Lake Point, twenty miles east of Salt Lake City, the captain of the steamer General Garfield informed me that